CLAIMS

1. Vortex generator in a flow duct to which a fluid medium is applied, which vortex generator (2) has surfaces extending in the direction of the main flow (1) and surfaces around which flow occurs freely, of which at least two surfaces form side surfaces (3) and (4) supported on the duct wall (6), which side surfaces (3) and (4) converge towards each other in flow direction and meet at an acute angle α in a common edge (7) that forms the downstream edge (7) of the vortex generator (2), and of which at least one surface forms a top surface (5) that in flow direction extends away from the duct wall (6) at an acute angle θ and forms trailing edges (9) and (10) together with the side surfaces (3) and (4), characterized in that the vortex generator (2) has at least one outlet opening (12) for a targeted introduction of a secondary flow (13) into the core flow of the forming wake vortex (11).

2. Vortex generator according to Claim 1, characterized in that the at least one outlet opening (12) is located in the area of the side surfaces (3) or (4).

3. Vortex generator according to Claim 2, characterized in that the at least one outlet opening (12) is located at half the chord length immediately below the trailing edge (9) or (10).

4. Vortex generator according to Claim 2, characterized in that at least one side surface (3) or (4) is equipped with a plurality of outlet openings (12) of a different

geometrical configuration, for example with respect to orientation and/or throughput.

5. Vortex generator according to Claim 1, characterized in that at least one outlet opening (12) is located at the downstream edge (7) of the vortex generator (2).

6. Vortex generator according to Claim 5, characterized in that the downstream edge (7) has a plurality of outlet openings (12).

7. Vortex generator according to Claim 6, characterized in that the downstream edge (7) has a plurality of outlet openings with a different geometrical configuration.

8. Vortex generator according to Claim 1, characterized in that the at least one outlet opening (12) is constructed with a circular cross-section.

9. Vortex generator according to Claim 1, characterized in that the at least one outlet opening (12) is constructed in a slit shape.

10. Method for controlling the wake flow of a vortex generator in a flow duct to which a fluid medium is applied, which vortex generator has essentially three surfaces extending in the flow direction and around which surfaces flow occurs freely, of which surfaces at least two surfaces form side surfaces (3; 4) supported on the duct wall (6), which side surfaces converge towards each other in flow direction and meet at an acute angle α in a common edge (7), and of which at least one surface forms a top surface (5) that in flow direction extends away from the duct wall at an acute

angle θ and forms trailing edges (9;10) together with the side surfaces (3;4), whereby the flowing fluid forms a pair of countercurrent vortices (11) downstream from the trailing edges (9;10), the vortex axes of said vortices being in the axis of the main flow (1), characterized in that an axial impulse is introduced in the zone of the core flow of the forming wake vortices (11) at least approximately in the direction of the main flow (1).

11. Method according to Claim 10, characterized in that a secondary flow (13) is introduced into the core flow of the wake vortex (11) in a targeted manner.

12. Method according to Claim 11, characterized in that a secondary fluid is introduced into the vortex core flow via outlet openings (12) on the vortex generator (2).

13. Method according to Claim 12, characterized in that the throughput of the secondary medium (13) is variably adjustable.

14. Method according to Claim 11, characterized in that the secondary medium is a component to be mixed into the main flow (1).

15. Method according to Claim 11, characterized in that the mass portion of the secondary flow (13) in relation to the main flow (1) is 0.1% to 5%, preferably 0.5% to 1,5%.